LINAC COMMISSIONING FORM   21-sep-2001

Major Category: DTL Tank2-6

Sub-Category: Beam Sub-category (for DTL Tank 4)

Sub-System (e.g. beam emittance, or BPM etc.): Steering

Objective: Guide the beam through the center of tank 1-4 quads (horizontal and vertical directions)

Requested by: J.Galambos

Date Proposed:

Estimated Time to Complete: 1 shifts

Estimated Manpower to Complete: 2 man-shifts

Priority/Order: high/2

Basic Equipment Needs (e.g. which diagnostics): BPMs, and dipole correctors

Special Equipment Needs: None

Software/Application needs: Steering algorithm

Input Beam Requirements: Short pulse beam (100 μsec), > 20 mA, 10 Hz

Other prerequisites: None

Correlations Sought: None

Procedure: Vary each corrector in Tanks 1-4 independently and observe the effect on the positions of each BPM in Tanks 1-4. Using this response matrix, find the combination of dipole corrections that minimizes the average beam offset between the orbit and BPM center, subject to dipole corrector constraints.

Supporting Computations: None

Problems Expected: None

Comments: If the beam based quad alignment has been done, then appropriate corrections to the BPM centers should be included in the procedure.

Date Completed LANL: **Date Completed ORNL:**

Results:

Problems Encountered: